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SEAT BELT USAGE AND DRIVER ATTITUDE SURVEY
MAY / JUNE 1984

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EXECUTIVE SUMMARY

A survey of seat belt use by drivers and passengers, including children, was conducted at 50 roadside sites throughout the Province of Ontario in May/June 1984. A total of 7,013 drivers, 2,856 passengers, and 914 children under the age of 5 were observed in the survey. Following are some of the major findings of the survey.

1. Driver seat belt use was approximately 70.0%, representing a 10% increase over seat belt use observed in May, 1981. Females were more likely to wear seat belts than males, and younger drivers (e.g., 16 to 19 years of age) were less likely to wear seat belts than older drivers.

2. An approximately 20% increase in passenger seat belt use (to 69.6%) was observed over the 1981 survey. Differences in passenger seat belt use were observed for seating position, urban/rural areas, sexes, and passenger age.

3. The use of child safety seats was more frequent for children between 1 to 5 years of age than for children under 1 year of age. However, for both groups, there were frequent instances of misuse of safety seats either due to use of an unapproved child seat or to incorrect installation. Only about 1/4 of the children observed were correctly restrained in an approved child safety seat.

4. "Safety", "law", and "habit" were the main reasons given by drivers for wearing their seat belts. The main reasons given for drivers not wearing seat belts were "forgot", "inconvenient", and "unnecessary".

5. The majority of drivers were in favour of the present seat belt law for adults (74.3%) and felt it was important for children under 5 years of age to use child safety seats (94.7%). And, 77% of drivers reported being aware of the Ontario child restraint law.

1. INTRODUCTION

Prior to the enactment of legislation by the Ontario government on January 1, 1976, which made the use of seat belts mandatory throughout the province, the Ministry of Transportation and Communications (MTC) completed a major province-wide survey of driver and passenger seat belt use. Since that time, six similar surveys have taken place.

The surveys were conducted in October 1975, March 1976 (just after enforcement of seat belt laws began), and November/December 1976, May 1977, May 1978, May 1981 and May/June 1984. The three initial surveys (October 1975, March 1976 and November/December 1976) assessed only driver and passenger seat belt use. In May 1977 and May 1978, a driver attitude assessment was added which was distributed separately from the seat belt use survey; drivers who were stopped for the attitude survey were not included in the seat belt use survey and vice versa. The May 1981 survey combined, modified and condensed pertinent features of previous seat belt use and attitude surveys. New emphasis was placed on the observed use and perceived importance of child safety restraints and attitudes toward their use. An additional survey was conducted on Saturdays.

The May/June 1984 study increased the emphasis on gathering information regarding child safety restraints. Extra survey sites, most of which were scheduled for surveying on Saturdays,

were chosen near shopping malls in order to increase the potential of contact with vehicles containing children. Except for the inclusion of the new sites, all other aspects of the design and execution of this study mirrored those of the previous studies.

1.1 Sampling Plan and Procedure

The sampling plan for this survey was designed by MTC in 1975 to obtain a representative sample of Ontario drivers*. This three-stage plan involved selecting areas of the province, then actual sites within these areas and, finally, drivers from the traffic stream passing these sites. Automobiles were stopped as they travelled down the street or highway. The driver was then asked to respond to various questions relating to seat belts and child safety seats.

Interviewers recorded the observed use of seat belts by drivers and passengers, the make and model of the automobile, and, where applicable, the type of child restraint used, as well as the details of the restraint's installation (included in Appendix A). The drivers were interviewed by specially-trained students. These students were supervised by MTC Traffic Surveys staff working for the Traffic Engineering Office.

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*A detailed description of the sampling plan and methodology may be found in "Data Gathering Techniques - Roadside and Telephone Surveys for Ontario", written by A.P. Cunliffe, et al., 1975.

There were four survey crews, containing about four members each, which travelled throughout the province administering the questionnaire. Each crew consisted of a crew chief whose responsibilities included identifying and preparing the site, stopping and redirecting traffic, obtaining an accurate traffic count, and supervising the interviewing staff. Each site was prepared by erecting a sign about 200 m before the actual survey location to inform drivers to be prepared to stop.

The data was collected during four consecutive one-hour periods, at most sites, with approximately 36 drivers being interviewed during each 60-minute interval. In locations where the traffic count was not high enough to obtain the desired quota of approximately 144 drivers during each four-hour period, the site was monitored until the quota was reached.

1.2 Survey Sites

The sites were categorized by region, type of site, and road type. The six regions of the province used in this study (Northwest, Northeast, West, Toronto, Central and East) are shown in Figure 1.

The types of sites included Metropolitan Toronto, large-sized cities (populations greater than 150,000), medium-sized cities

(populations of 50,000 to 150,000), small-sized cities (populations of 10,000 to 50,000), urban-rural areas (within 16 km from a large-sized city), and rural-rural areas (more than 16 km from a large-sized city). Two expressway sites were also sampled. A site was categorized as an urban area if it was located in Metropolitan Toronto or in either a large-, medium- or small-sized city. Rural sites were located in either urban-rural areas or rural-rural areas. The road types on which drivers in urban areas were sampled were downtown or suburban streets. Drivers in rural areas were sampled on either King's Highways, secondary highways or county roads. Fifty-two sites (two expressway and 50 non-expressway) were sampled on weekdays. The two expressway sites were examined separately, rather than being included in the major portion of the analysis. Fifteen additional sites were set up close to shopping malls in order to increase the opportunity of contacting cars containing children. Thirteen of these fifteen sites were sampled on Saturdays.

1.3 Questionnaire Data

Driver seat belt use was examined with respect to three variables and combinations of these variables. These three variables were the sex of the driver, the age of the driver, and the location of the site at which the driver participated in the study.

The analysis of passenger seat belt use concentrated on the age group, sex and seating position of the passenger, as well as the site location for the interview. The passenger's discrete age was recorded when less than 16 years of age. For passengers 16 or older, ages were categorized and recorded on the questionnaire as follows:

A - 16 to 19 years of age
B - 20 to 29 years of age
C - 30 to 39 years of age
D - 40 to 40 years of age
E - 50 to 59 years of age
F - 60 years of age and older

The methods used to restrain children under five years of age were examined separately and comprehensively in order to ascertain what percentages of the children sampled were restrained by proper safety seats, by seat belts, or not at all.

Drivers were asked to respond to several key questions related to seat belts and child safety seats. The information sought was:

- reasons given by drivers for wearing seat belts
- reasons given by drivers for not wearing seat belts
- driver opinion of the current seat belt law for adults

- number of children under five years of age in the household of the driver
- average number of trips taken per week with children under five in the car
- the importance attached by the driver to the use of child safety seats by children under five years of age
- awareness of the Ontario child restraint safety seat law
- for drivers with forward-facing child restraints, problems encountered when installing the tether strap for the safety seats, or, alternatively, why the driver had not installed the required safety strap
- number of child safety seats in the household of the driver
- source of the child safety seat (i.e. purchased new or used, gift either new or used)
- problems with the safety seat(s)
- comments regarding the use of child safety seats

1.4 Driver and Passenger Distribution

The survey results indicated that 7,013 drivers were sampled at the 50 roadside sites, 2,195 drivers were sampled at the 15 sites located close to the shopping malls, and 284 drivers were sampled at the two expressway sites. The following tables show the sex and age distribution of drivers sampled at these sites, in percentages.

Sex Distribution of Drivers (Percentage)

SEX	ROADSIDE SITES	MALL SITES	EXPRESSWAY SITES
Male	62.93	63.17	79.00
Female	37.07	36.83	21.00
TOTAL	100.00	100.00	100.00

Age Distribution of Drivers (Percentage)

AGE GROUP	ROADSIDE SITES	MALL SITES	EXPRESSWAY SITES
A (16-19)	4.01	4.77	4.63
B (20-29)	22.54	23.19	16.01
C (30-39)	25.41	30.57	21.35
D (40-49)	18.84	19.62	21.00
E (50-59)	14.01	12.79	19.57
F (60 and up)	15.19	9.07	17.44
TOTAL	100.00	100.00	100.00

There were approximately 3,436 passengers sampled at the 50 roadsites, 1,948 passengers sampled at the 15 mall sites, and 270 passengers sampled at the two expressway sites. An age group distribution of passengers is shown in the following table for roadside, mall and expressway sites.

Passenger Age Group by Location (Percentage)

AGE GROUP	ROADSIDE SITES	MALL SITES	EXPRESSWAY SITES
Adult (A-F)	76.16	56.93	81.48
Youth (6-15)	5.88	24.23	12.59
Child (0-5)	17.96	18.84	5.93
TOTAL	100.00	100.00	100.00

The passenger per car sampled ratio for the roadside sites was 0.480, for the mall sites the ratio was 0.888, while for the expressway sites the ratio was 0.951. A smaller percentage of adults was sampled at the mall sites than at the roadside or expressway sites. The highest percentage of youths sampled was at the mall sites, while the smallest percentage of children sampled was at the expressway sites.

2. DRIVER ANALYSIS

The following sections provide a description of driver seat belt use in Ontario. The results are based on the data collected at the 50 roadside sites. The 15 mall and two expressway sites are not included, except when noted, as these sites were not sampled in a manner that would ensure a representative sample of Ontario drivers. A total of 7,013 drivers were sampled at the 50 sites.

Three-point seat belt systems (i.e. automatic or manual lap and shoulder belts) were required by legislation to be installed in vehicles manufactured after 1973. Since the vast majority of vehicles sampled in the survey were 1974 or newer models, the (correct) seat belt use reported in the text refers to use of the complete three-point system.

2.1 Driver Seat Belt Use by Location

Overall, driver seat belt use was 70%. The usage rate for drivers was over 70% in the Northwest (75.5%)*, East (72.8%), and Toronto (71.7%) Regions; slightly below 70% in the West

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*The use of seat belts in the Northwest Region is probably inflated since a Selective Traffic Enforcement Program (STEP) was underway at the time of the survey. The program involved a media campaign encouraging seat belt use and increased enforcement for failure to wear seat belts.

(69.3%) and Central (68.0%) Regions; and somewhat below 70% in the Northeast (63.7%) Region (Table 1). Seat belt use in rural and urban areas was similar (71.5% and 69.2%; Table 1).

The foregoing figures are for the 50 sites common to the current and previous seat belt surveys conducted by MTC. Inclusion of the 15 mall and two expressway sites increases the observed rate of seat belt use to 71.25%. Seat belt use at mall sites was 75.3% and 72.2% at the expressway sites (Table 2).

2.2 Driver Seat Belt Use by Demographics

Seat belt use was higher among female drivers (74.4%) than male drivers (68.5%) (Table 3). The higher seat belt use by females was observed across regions and urban-rural areas (Table 3).

Age of the driver had an impact on seat belt use. Drivers of the age 30 and over had higher compliance rates than their younger counterparts. Seat belt use for drivers aged 30 and over was greater than 70.0%, ranging from 72.2% for drivers aged 30 to 39 to 74.1% for drivers aged 60 and over. Drivers aged 16 to 19 of age had the lowest rate of seat belt use at 57.9%, while seat belt use for drivers aged 20-29 was 65.7% (Table 4). With few exceptions (see Table 4), the same pattern of seat belt use was observed for the age categories across regions.

For all age categories, except drivers 16 to 19 years of age, females had higher rates of seat belt use than males (Table 5). The difference in seat belt use for males and females in the 16 to 19 year age category was very slight (58.5% versus 57.1%).

To summarize, of the variables examined in the survey, the age and sex of the driver appear to influence seat belt use. Younger drivers, especially in the 16 to 19 year age range, were less likely to wear seat belts than older drivers. In all cases, except for drivers of age 16 to 19, females wore seat belts more often than males. Regional differences in seat belt use were not very pronounced, with the exception of the North-east Region which was around 6% below the provincial average.

2.3 Comparison to 1981 Survey

Seat belt use by drivers increased by approximately 10% since the 1981 survey (70.0% in 1984 versus 59.3% in 1981)*. The increase was general, occurring in all regions, for both urban and rural areas, for males and females, and across the age range. The generality of the increase suggests that the factors which are encouraging drivers to use seat belts are influencing the total driver population.

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*The 10% increase is maintained even if the data for the Northwest Region is excluded from the 1984 survey (see previous footnote), although there is a slight reduction to 69.5% in 1984 versus 59.3% in 1981.

There are a number of possible reasons for the increase in use of seat belts by drivers. The fine for failure to wear a seat belts was increased from $26 to $53 as of December 1983. This stiffer penalty may have encouraged more compliance with the seat belt law. Additionally, the publicity surrounding the introduction of the increased fine may have increased compliance through an increased awareness of the seat belt law. The design of seat belts has improved and resulted in an increase in their comfort, which may have enhanced the use of seat belts. Further possible reasons for the observed increase in seat belt use might be an increased belief by the public that seat belts do increase safety. It is likely that several reasons have converged to influence increased use of seat belts.

3. PASSENGER ANALYSIS

The following sections provide a description of the use of seat belts by passengers. The results are based on data collected at the sites described previously. As for the analysis of seat belt use by drivers, the 15 mall sites and two expressway sites are not included, except where noted.

Passengers were grouped into three categories: adults, defined as 16 years of age or older; youths, defined as 5 to 15 years of age; and children, defined 0 - 4 years of age. Children are discussed in the next chapter on child restraint use.

3.1 Overall Passenger Seat Belt Use

Overall, passenger seat belt use was 69.6%. With the exception of the Northwest Region (81.2%), which may have been influenced by the STEP program described earlier, use of restraints by passengers was fairly similar across regions: Central (69.1%); East (68.6%); Northeast (68.2%); Toronto (66.0%); and West (64.9%) (see Table 6).

Front seat passengers had higher seat belt use than rear seat passengers, 72.1% versus 59.0%. And, passengers seated in a central position, either in the front (44.7%) or in the rear (40.0%) had the lowest rate of seat belt use (Table 7).

Female passengers wore seat belts more frequently than male passengers, 72.6% and 63.7% respectively. And, seat belts were worn by passengers more often in rural (75.1%) than in urban (66.8%) areas (Table 8). The latter result may have been influenced by the STEP Program in the Northwest region - a predominately rural area (See pg. 9).

3.2 Passenger Seat Belt Use by Age

There was very little difference in seat belt use between adult (69.7%) and youth (68.2%) passengers. However, there were differences in compliance among the age groups making up the adult category. The lowest rates of seat belt use were observed for the 16 to 19 years old (58.1%) and 20 to 29 year olds (61.5%). Passengers in the 30-39 year old age group had a usage rate of about 70.5%, while passengers 40 and over had usage rates of about 75.0% (40 to 49 - 74.3%; 50 to 59 - 74.8%; 60 and over - 75.7%) (see Table 9).

The tendency for increased use of seat belts for the older age groups was observed for both males and females (although there was a decrease in seat belt use by males in the 50 to 59 age group, 62.6%) (see Table 10). And, with the exception of 16 to 19 year olds, a similar pattern was observed in both urban and rural areas (see Table 11).

To summarize, the use of seat belts by passengers appears to be influenced by a number of factors. Front seat passengers wore seat belts more frequently than rear seat passengers, females were more likely than males to wear seat belts, seat belts were used more frequently in rural than urban areas, and younger (adult) passengers, especially in the 16 to 29 year age ranges, were less likely to wear seat belts than older adults. The regions did not vary much in the use of seat belts.

3.3 Comparison to 1981 Survey

Compared to the passenger seat belt use of 48.9% observed in the 1981 survey, the 69.6% use observed in the present survey is a dramatic increase. As would be expected given the magnitude of the increase, it was general, occurring in all regions, for both rural and urban areas, males and females, and across the age ranges. Interestingly, the factors which were observed to influence seat belt use in the 1981 survey are the same as those noted in the current survey. That is, females wore seat belts more often than males, rural areas had higher usage rates than urban areas, seat belt use increased with age, and seat belts were used more frequently by front seat passengers than rear seat passengers. Thus, in terms of the factors analysed in the present survey, no specific factor(s) can be identified as having a disproportionate influence in accounting for the observed increase in seat belt use by passengers.

As for the drivers, there are probably several reasons that have influenced passengers to increase their use of seat belts. Awareness that passengers, like drivers, are subject to fines for failure to wear a seat belt may have influenced compliance. Publicity campaigns, such as the one sponsored by MacDonald's in the spring 1984, increased comfort of seat belts, and the development of the habit of "buckling up" are other possible reasons for the observed increase in seat belt use.

4. CHILD RESTRAINT ANALYSIS

In Ontario, children are required to be restrained when travelling in a private vehicle. The type of restraint required varies with the child's weight and whether or not they are travelling in their parent's vehicle. All children, regardless of whom they are travelling with, from birth to 9 kg of weight (infants) are required to be restrained in a Canadian Motor Vehicle Standards approved rear-facing child safety seat. Between 9 to 18 kg of weight (toddlers), children travelling in a parent's vehicle are required to be in an approved child restraint seat. A lap belt must be used when not travelling in a parent's vehicle. Children between 18 to 23 kg of weight are to use a lap belt with the shoulder portion placed behind the back if necessary. Above that weight the seat belt assembly provided in the seating position is to be used.

The child restraint law was introduced in Ontario in two stages. The first stage came into effect November 1, 1982 and included all children born on or after that date as well as children who were 18 kg or more. After November 1, 1983, all children were included so that, from birth onwards, all private vehicle occupants are required to be appropriately restrained.

4.1 Infant Restraint

For the purposes of the survey, age rather than weight was used to define infants and toddlers, since weight would have been too difficult to estimate. A child was considered to be an infant if he/she was less than one year of age. The number of infants observed in the survey was very small with only 80 observations. Thus, the present results can be considered merely to be suggestive.

Table 12 describes the results of restraint use for infants. Slightly more infants were restrained as compared to unrestrained (44 versus 36). However, only 20 (25%) of the infants observed were correctly restrained in an approved child safety seat. A further 12 (15%) were in approved child safety seats but were improperly restrained (e.g. harnesses or belts were either incorrectly used or were not used at all). One infant was in a lap belt, another in a booster seat. Eight others were travelling forward facing which may or may not have been appropriate for their weight. In two instances, infants were in baby carriers. Thus, in 44 of the 80 instances (55%) some attempt to restrain infants was made, although such attempts were correct less than half the time.

Only three (4%) infants were observed to be without any type of protection, i.e. completely unbelted. There were 33 (41%) who were on an adult's lap - a very unsatisfactory method of infant restraint.

As has been acknowledged, the data base for infants was small. Nevertheless, the results do suggest that a large percentage of infants were either incorrectly restrained or not restrained at all.

4.2 Toddler Restraint

Children over 1 and under 5 years of age were defined as toddlers. A total of 834 toddlers were observed in the survey. Table 13 describes the use of restraints for toddlers.

The use of approved child safety seats was observed in 336 (40%) instances. However, in only 30% of these instances (98) was the seat used correctly. In the other 238 instances, either the seat was not installed in the vehicle correctly or the child was not properly fastened in the seat.

Toddlers were in some type of restraint device in a further 322 (38.6%) instances, including the use of lap belts (223; 26.7%), booster seats (65; 7.8%), infant seats, either rear- or front-facing (15; 1.8%), convertible seats, rear-facing (11; 1.3%), and other unapproved carriers (8; 1%). Toddlers were unrestrained in 176 (21.1%) instances, either being unbelted (141; 16.9%) or sitting on an adult's lap (35; 4.2%). The number of toddlers, then, in some type of restraint device, whether approved or not, exceeded the number not in any restraint device, 658 (78.9%) versus 176 (21.1%).

As would be expected, toddlers in a parent's vehicle were more frequently in an approved restraint, either properly, 85 (15.3%) or improperly, 186 (33.5%) secured, than when not in a parent's vehicle, 13 (5.3%) and 52 (21.4%) respectively. And, conversely, the use of lap belts for toddlers was less when in a parent's vehicle, 127 (22.6%) than when not in a parent's vehicle, 96 (40.5%). The use of other types of restraint devices did not appear to differ whether toddlers were or were not in their parent's vehicle, although the number of observations for these categories were small.

As was the case with infant restraint use, the foregoing does not describe restraint use strictly in terms of conformity to the child restraint legislation. Since age was used as a proxy variable for weight - upon which the legislation is based - it is not possible in all cases to state whether a child was restrained in accordance with the legislation. For instance, some proportion of the toddlers observed in lap belts or booster seats may have weighed enough to be considered to have been legally restrained with these devices.

4.3 Summary of Child Restraint Analysis

Although the data, especially for infants, is limited, several important points are suggested. There appears to be a difference in the use of restraints for infants (children under one year of age) and toddlers (children between one and four

years of age). A restraint device was used for only 55% of the infants observed, whereas 79% of the toddlers were in some type of restraint device.

There are several reasons for why infants may be restrained less often than toddlers. Infants may fuss more than toddlers when in a child safety seat, leading parents to attempt to pacify them by holding them. A further possible reason may be parents' erroneous belief that an infant can be safely restrained by holding it, as long as they themselves are restrained. Both of these explanations would be consistent with the observation that 33 of the 80 infants observed (41%) were on an adult's lap. A slightly different explanation might be that parents are more likely to restrain toddlers to restrict their mobility in the vehicle rather than for safety purposes, i.e. the child safety seat functions much like a play pen.

Economic considerations may influence the difference in use of safety seats for infants and toddlers. While the initial purchase price of an infant safety seat is less than for a child restraint seat for toddlers, the length of time the latter can be used is greater. Thus, some parents may decide to forego the purchase of an infant seat and wait until the child is older to purchase a seat for toddlers. In the present study, however, the majority of seats observed were convertibles - i.e. could be used for both infants and toddlers. Thus, an economic argument must be tempered.

Which, if any, of the foregoing explanations influence the decision to use safety seats for infants, it is important that efforts be undertaken to increase the use of child safety seats particularly for infants.

A second aspect of the data which deserves comment was the frequency of misuse of child safety seats. Considering infants and toddlers together and considering only those instances in which an approved child safety seat was used (368), the seat was misused two-thirds of the time (250). Misuse typically resulted from seat belts not fastened or routed correctly, harnesses not fastened or placed too loosely on the child, and, especially for child safety seats for toddlers, tether straps not fastened or incorrectly installed. The combination of the misuse of approved seats and the use of inappropriate restraint devices suggests a need for more efforts to educate parents in the use of child safety seats.

5. DRIVER RESPONSES TO QUESTIONNAIRE

The following section outlines drivers' responses to questions for seatbelt legislation and, for drivers with child restraints in their vehicle, questions on the use of child restraints.

Forty-five per cent (45.0%) of the drivers wearing seat belts reported wearing their seat belts for reasons of "safety", while 33.0% reported reasons of the "law". A further 5.6% gave "law and safety" as a reason. "Habit" was given as a reason by 10.8% of the drivers. The remaining 5.6% of the drivers gave a variety of reasons, including "comfort", "accident experience", and the "survey" (each occurring for less than 1% of the drivers).

The drivers not wearing seat belts provided reasons such as "forgot" (23.6%), "inconvenient" (22.9%), and "unnecessary" (21.8%). Less frequent reasons included "medical" (7.7%), "not safe" (2.4%), and "pregnancy" (1.0%).

The rank ordering of the reasons (and the actual percentage of responses) of the current survey are very similar to the results of the 1981 survey. Thus, while the observed use of seatbelts has increased, the drivers' responses to the questionnaire do not point to any specific reason(s) for the increase.

When asked whether they were in favour of the present seat belt law for adults, 74.3% of the drivers responded "yes", and only 19.3% responded "no". (The remaining drivers were either indifferent (4.5%) or "didn't know" (0.5%).) A vast majority of the drivers, 94.7%, felt it was important for children under 5 years of age to use child safety seats. Although a lesser, but still appreciable, number, 77.1%, reported being aware of the Ontario child restraint law.

Drivers with forward facing child restraints (i.e. restraints for toddlers) in their vehicle, regardless of whether there was a child in it or not, were asked questions about their use of restraints. Of drivers (N = 243) with restraints which had the tether strap installed (properly or improperly), the majority, 85.2%, stated they had "no" problems in installing the tether. Some reported experiencing problems due to "poor instructions" (1.3%) or "attaching to the car frame" (1.2%), with the remainder either "not knowing" (2.9%) perhaps because they did not install the child restraint, or giving a variety of infrequently occurring "other" (9.4%) reasons.

As would be expected, drivers without the tether strap installed (N = 313) provided a variety of reasons for not installing it. The most frequent response was that they "didn't know it should be installed" (23.6%). Problems with installation were reflected by responses such as "didn't know how" (13.1%) and "couldn't" (10.2%). Another frequent reason was that "the seat was used in two vehicles" (12.8%). A large percentage of drivers (31.0%) did not articulate a specific reason for the failure to install the tether.

Most of the drivers interviewed had got their child restraints new, either by "purchasing it" (75.3%) or as a "gift" (8.9%). "Used" child restraints, either through "purchase" (6.8%) or as a "gift" (4.3%) occurred considerably less often. And, only 1.6% reported "renting" their child restraint.

When asked what problems they had with child restraint seats, 86.4% of the drivers reported "none". Interestingly, only 0.7% of the drivers reported the "tether" as a problem, despite the frequency of misuse and/or failure to install the tether observed in the survey.

6. SUMMARY

Seatbelt use by drivers and, especially, passengers has increased since the May, 1981 survey. For drivers, an approximately 10% increase was observed since the 1981 survey. Furthermore, the increase was general, occurring in all regions, for both urban and rural areas, for males and females, and across the age range.

While the increase in seat belt use by drivers was relatively uniform across the variables analyzed in the survey, the age and sex of the driver continue to exert an influence on seat belt use. Specifically, younger drivers, especially 16 to 19 year olds, are less likely to wear seat belts than older drivers and females are more likely to wear seat belts than males.

Seat belt use by passengers was considerably increased over the 1981 survey by approximately 20%. The magnitude of the increase in seat belt use by passengers resulted in similar usage rates for drivers (70.0%) and passengers (69.6%) in the present survey.

Again, the increase in seat belt use by passengers was general occurring in all regions, urban and rural areas, for males and females, and across the age range. And, as in previous surveys, front seat passengers were more likely than rear seat passengers to wear seat belts, females were more

likely than males to wear seat belts, and older passengers wore seat belts more than younger passengers (i.e., in the 16 to 29 year age range). Also, seat belts were worn in rural areas more frequently than in urban areas.

Drivers' responses to the questionnaire were very similar to those of the 1981 survey. Drivers wearing seat belts gave the reasons of "safety", "law", or "habit", while those not wearing seat belts provided reasons of "forgot", "inconvenient", or "unnecessary". The rank ordering, and frequency, of the reasons given for wearing/not wearing seat belts were the same as was obtained in 1981. Thus, while the observed use of seat belts increased, the drivers' responses do not suggest any specific reason(s) for the increase. (Passengers were not asked to provide reasons for use/non-use of seat belts.)

On the basis of the present survey, it appears that child restraints are used more frequently for children between the age of 1 to 5 years than for children under 1 year of age (79% vs 55% usage). (However, there were very few observations for children under 1 year of age.) But, for both groups of children, there was considerable misuse of child restraints; due either to the failure to use an approved child safety seat or to the incorrect installation of approved child safety seats. In fact, only about one-eighth of the children under 5 observed in the survey were correctly restrained in an approved child safety seat.

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TABLE 1

Driver Seat Belt Use by Region and Urban-Rural in May/June 1984

REGION	SEAT BELT USE	
	YES	NO
Northwest	75.5% N = 654	24.5% N = 212
Northeast	63.7% N = 525	36.3% N = 299
West	69.3% N = 1,087	30.7% N = 482
Central	68.0% N = 1,247	32.0% N = 587
East	72.8% N = 1,042	27.2% N = 389
Toronto	70.0% N = 600	28.3% N = 237
Provincial	70.0% N = 5,155	30.0% N = 2,206
Urban	69.2% N = 3,542	30.8% N = 1,564
Rural	71.5% N = 1,613	28.5% N = 642

TABLE 2

Driver Seat Belt Use by Location of Site Sampled in May/June 1984

	SEAT BELT USE	
LOCATION OF SITE	YES	NO
Roadside (Historic Sites) N = 50	70.0% N = 5,155	30.0% N = 2,206
Mall Sites N = 15	75.3% N = 1,639	24.7% N = 536
Expressway Sites N = 2	72.2% N = 197	27.8% N = 76

TABLE 3

Driver Seat Belt Use by Sex, Sex and Region, and Sex and Urban-Rural Location in May/June 1984

	SEAT BELT USE			
REGION	MALE		FEMALE	
	YES	NO	YES	NO
Northwest	72.8% N = 311	27.2% N = 116	79.2% N = 232	20.8% N = 61
Northeast	69.0% N = 221	31.0% N = 99	71.7% N = 66	28.3% N = 26
West	66.8% N = 498	33.1% N = 247	72.3% N = 387	27.3% N = 148
Central	66.2% N = 703	33.8% N = 359	70.0% N = 453	30.0% N = 194
East	68.9% N = 617	31.1% N = 257	76.8% N = 425	23.2% N = 128
Toronto	68.2% N = 401	31.8% N = 187	79.8% N = 198	20.2% N = 50
Provincial	68.5% N = 2,751	31.5% N = 1,265	74.4% N = 1,761	25.6% N = 607
Urban	67.9% N = 1,827	22.1% N = 856	74.2% N = 1,278	25.8% N = 445
Rural	69.7% N = 924	30.3% N = 401	74.8% N = 483	25.2% N = 163

TABLE 4

Driver Seat Belt Use by Age, and Age and Region
in May/June 1984

SEAT BELT USE

REGION	16 - 19		20 - 29		30 - 39		40 - 49		50 - 59		60+	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Northwest	58.8%	41.2%	67.3%	32.7%	80.0%	20.0%	79.7%	20.3%	80.0%	20.0%	82.5%	17.5%
	N = 20	N = 14	N = 142	N = 69	N = 143	N = 36	N = 98	N = 25	N = 68	N = 17	N = 66	N = 14
Northeast	60.0%	40.0%	61.7%	38.3%	74.5%	25.5%	70.9%	29.1%	74.0%	26.0%	66.7%	33.3%
	N = 3	N = 2	N = 50	N = 31	N = 82	N = 28	N = 61	N = 25	N = 37	N = 13	N = 48	N = 24
West	54.9%	45.1%	62.7%	37.3%	68.1%	31.9%	75.6%	24.4%	71.8%	28.2%	72.0%	28.0%
	N = 28	N = 23	N = 178	N = 105	N = 196	N = 92	N = 167	N = 54	N = 140	N = 55	N = 170	N = 66
Central	60.5%	39.5%	60.5%	39.5%	69.7%	30.3%	70.6%	29.4%	65.6%	34.4%	73.7%	26.3%
	N = 46	N = 30	N = 207	N = 135	N = 302	N = 131	N = 228	N = 95	N = 168	N = 88	N = 196	N = 70
East	53.8%	46.2%	74.1%	25.9%	73.3%	26.7%	71.6%	28.4%	75.6%	24.4%	76.8%	23.2%
	N = 35	N = 30	N = 220	N = 77	N = 283	N = 103	N = 184	N = 73	N = 146	N = 47	N = 172	N = 52
Toronto	65.2%	34.8%	65.8%	34.2%	73.2%	26.8%	74.2%	25.8%	74.6%	25.4%	72.4%	27.6%
	N = 15	N = 8	N = 127	N = 66	N = 158	N = 58	N = 132	N = 46	N = 82	N = 28	N = 76	N = 29
Provincial	57.9%	42.1%	65.7%	34.3%	72.2%	27.8%	73.2%	26.8%	72.1%	27.9%	74.1%	25.9%
	N = 147	N = 107	N = 924	N = 483	N = 1,164	N = 448	N = 870	N = 318	N = 641	N = 248	N = 728	N = 255

TABLE 5

Driver Seat Belt Use by Sex and Age in May/June 1984

AGE	SEAT BELT USE			
	MALE		FEMALE	
	YES	NO	YES	NO
16 - 19	58.5% N = 86	41.5% N = 61	57.1% N = 60	42.9% N = 45
20 - 29	62.0% N = 523	38.0% N = 321	71.0% N = 396	29.0% N = 162
30 - 39	68.6% N = 636	31.2% N = 288	76.9% N = 528	23.1% N = 159
40 - 49	71.0% N = 533	29.0% N = 218	77.4% N = 336	22.6% N = 97
50 - 59	71.4% N = 412	28.6% N = 165	74.1% N = 229	25.9% N = 80
60+	73.2% N = 536	26.8% N = 196	76.6% N = 190	23.4% N = 58

TABLE 6

Passenger Seat Belt Use by Region in May/June 1984

REGION	SEAT BELT USE YES	NO
Northwest	81.2% N = 341	18.8% N = 79
Northeast	68.2% N = 282	31.8% N = 131
West	64.9% N = 348	35.1% N = 188
Central	69.1% N = 458	30.9% N = 205
East	68.6% N = 396	31.4% N = 181
Toronto	66.0% N = 163	34.0% N = 84
Provincial	69.6% N = 1,988	30.4% N = 868

TABLE 7

Passenger Seat Belt Use by Seating Position in May/June 1984

SEATING POSITION	SEAT BELT USE YES	NO
Front - Right	72.7% N = 1,646	27.3% N = 618
Front - Central	44.7% N = 21	55.3% N = 26
Rear - Right	60.1% N = 184	39.9% N = 122
Rear - Central	40.0% N = 28	60.0% N = 42
Rear - Left	64.9% N = 111	35.1% N = 60
Front	72.1% N = 1,667	27.9% N = 644
Rear	59.0% N = 323	41.0% N = 224

TABLE 8

Passenger Seat Belt Use by Sex and Urban-Rural Location in May/June 1984

	SEAT BELT USE	
SEX	YES	NO
MALE	63.7% N = 571	36.3% N = 326
FEMALE	72.6% N = 1,385	27.4% N = 522

LOCATION	YES	NO
URBAN	66.8% N = 1,224	31.2% N = 608
RURAL	75.1% N = 763	24.9% N = 253

TABLE 9

Passenger Seat Belt Use by Age in May/June 1984

AGE	SEAT BELT USE YES	NO
5 - 15	68.2% N = 189	31.8% N = 88
16 - 19	58.1% N = 154	41.9% N = 111
20 - 29	61.5% N = 327	38.5% N = 205
30 - 39	70.5% N = 289	29.5% N = 121
40 - 49	74.3% N = 255	25.7% N = 88
50 - 59	74.8% N = 258	25.2% N = 87
60 +	75.7% N = 488	24.3% N = 157

TABLE 10

Passenger Seat Belt Use by Age and Sex in May/June 1984

AGE	SEAT BELT USE			
	MALE		FEMALE	
	YES	NO	YES	NO
5 - 15	67.7% N = 86	32.3% N = 41	72.3% N = 99	27.7% N = 38
16 - 19	55.8% N = 53	44.2% N = 42	59.4% N = 101	40.6% N = 69
20 - 29	56.3% N = 117	43.7% N = 91	64.8% N = 210	35.2% N = 114
30 - 39	64.4% N = 96	35.6% N = 53	73.9% N = 193	26.1% N = 68
40 - 49	72.1% N = 75	27.9% N = 29	75.3% N = 180	24.7% N = 59
50 - 59	62.6% N = 57	37.4% N = 34	79.1% N = 201	20.9% N = 53
60 +	70.7% N = 87	29.3% N = 36	76.8% N = 401	23.2% N = 121

TABLE 11

Passenger Seat Belt Use by Age, and Urban-Rural Location in May/June 1984

AGE	SEAT BELT USE			
	URBAN		RURAL	
	YES	NO	YES	NO
5 - 15	67.7% N = 134	32.3% N = 64	75.3% N = 55	24.7% N = 18
16 - 19	54.5% N = 115	45.5% N = 96	72.1% N = 44	27.9% N = 17
20 - 29	60.3% N = 223	39.7% N = 147	64.0% N = 110	36.0% N = 62
30 - 39	69.2% N = 180	30.8% N = 80	71.9% N = 110	28.1% N = 43
40 - 49	73.7% N = 168	26.3% N = 60	77.0% N = 94	23.0% N = 28
50 - 59	70.4% N = 145	29.6% N = 61	80.4% N = 115	19.6% N = 28
60 +	72.1% N = 259	27.9% N = 100	80.5% N = 235	19.5% N = 57

TABLE 12

Infant Restraint Use by Type of Restraint And Parent's Vehicle or Not Parent's Vehicle

RESTRAINT USE (N=80)

	PARENT'S VEHICLE	NOT PARENT'S VEHICLE	TOTAL
RESTRAINED			
Approved Restraint (Used Correctly)	17	3	20
Approved Restraint (Used Incorrectly)	8	4	12
Unapproved Restraint	5	5	10
Other Carrier (Unapproved)	1	1	2
UNRESTRAINED			
Unbelted	2	1	3
Adult's Lap*			33

* Data for infants on an adult's lap were not coded according to parent's vs not parent's vehicle.

TABLE 13

Toddler's Restraint Use by Type of Restraint And Parent's Vehicle or Not Parent's Vehicle

RESTRAINT USE

	PARENT'S VEHICLE (N=556)	NOT PARENT'S VEHICLE (N=243)	TOTAL (N=834)
RESTRAINED			
Approved Safety Seat (Used Correctly)	85 (15.3%)	13 (5.3%)	98 (11.8%)
Approved Safety Seat (Used Incorrectly)	186 (33.5%)	52 (21.4%)	238 (28.5%)
Convertible Seats (Rear Facing)	8 (1.4%)	3 (1.3%)	11 (1.3%)
Rear Seats (Front Facing)	2 (0.4%)	2 (0.8%)	4 (0.5%)
Rear Seats (Rear Facing)	6 (1.1%)	5 (2.1%)	11 (1.3%)
Booster Seats	48 (8.5%)	17 (7.2%)	65 (7.8%)
Lap Belt	127 (22.6%)	96 (40.5%)	223 (26.7%)
Other Carriers (Unapproved)	6 (1.1%)	2 (0.8%)	8 (1.0%)
UNRESTRAINED			
Unbelted	88 (15.7%)	53 (22.4%)	141 (16.9%)
Adult's Lap*			35 (4.0%)

* Data for toddlers on an adult's lap were not coded according to parent's vs not parent's vehicle.

Figure 1/ The Six Regions of Ontario and Their Associated Counties and Districts

APPENDIX A

Seatbelt Questionnaire

Number of child seats in car	Number of child seats in use	Number of other children under 5 in car	Date	Time	Day of Week M T W T F S	Location #	Interviewer #

Seat Position	Age	Driver's Relation to Child (if under 6)	Sex	Lap Belt	Shoulder Belt	Holding Child on Lap / Age	Child Restraint Type	Booster Seat Type	Other Carrier Type	Used	Front Facing	Rear Facing	Seat Belt	Tether	Harness
FRONT 1		P / O	M / F	Y / N / NI / CS	Y / N / NI / CS					Y / N			Y N Im CS	Y N Im CS N/A	Y N Im CS
FRONT 2		P / O	M / F	Y / N / NI / CS	Y / N / NI / CS					Y / N			Y N Im CS	Y N Im CS N/A	Y N Im CS
DRIVER			M / F	Y / N / NI / CS	Y / N / NI / CS		☐ Owned / Leased ☐ Other Make: _____ Model: ☐ 2 dr. ☐ 4 dr ☐ Sedan ☐ Hatchback ☐ Station Wagon ☐ Other _____								

Seat Position	Age	Driver's Relation to Child (if under 6)	Sex	Lap Belt	Shoulder Belt	Holding Child on Lap / Age	Child Restraint Type	Booster Seat Type	Other Carrier Type	Used	Front Facing	Rear Facing	Seat Belt	Tether	Harness
REAR 1		P / O	M / F	Y / N / NI	Y / N / NI					Y / N			Y N Im CS	Y N Im CS N/A	Y N Im CS
REAR 2		P / O	M / F	Y / N / NI	Y / N / NI					Y / N			Y N Im CS	Y N Im CS N/A	Y N Im CS
REAR 3		P / O	M / F	Y / N / NI	Y / N / NI					Y / N			Y N Im CS	Y N Im CS N/A	Y N Im CS

P - Parent O - Other Y - Yes N - No NI - Not Installed Im - Improper Use CS - Can't See N/A - Not Applicable

We are conducting a survey on seat belts. We would like to ask you a few questions about your opinion on seat belts. First

(OBSERVED BELT USE OF DRIVER) ☐ Wearing, Go to 1A
☐ Not Wearing, Go to 1B

• 1A/ What is your main reason for wearing your seat belt now? (Don't give categories)
☐ Law ☐ Safety Other _____
Go to 2.

• 1B/ What is your main reason for not wearing seat belts?
☐ Inconvenient ☐ Unnecessary ☐ Forgot ☐ Not Safe
Other _____

• 2/ Are you in favour of the present seat belt law for adults?
☐ Yes ☐ No ☐ Indifferent? ☐ Don't Know

• 3/ Do you have any children that are under five year of age in your household?
☐ Yes How Many _____ ☐ No

• 4/ How many trips on average do you make during the week (including weekends) with children under five years of age in the car? _____

• 5/ Do you think it is important for children under five years of age to use child safety seats?
☐ Yes ☐ No ☐ Indifferent ☐ Refused to Comment

• 6/ Are you aware of the Ontario child restraint safety seat law?
☐ Yes ☐ No ☐ Don't Know

To be asked only of drivers of cars with forward facing child restraints

For drivers with tether straps installed. (Properly or improperly)

7A/ What problems did you have installing the tether strap of your child safety seat?
_____ ☐ None ☐ Don't Know

For drivers without tether straps installed.

7B/ Why have you not installed the tether strap of your child safety seat?
☐ Didn't know how ☐ Couldn't ☐ Didn't know I should
Other _____

• 8/ Do you have any (other) child safety seats that are used by members of your household?
☐ Yes ☐ No

To be asked of drivers who have a restraint in their car or answered Yes to 8.

9/ How did you get your child safety seat? (Give categories)
☐ Purchased, ☐ Gift, ☐ Rent; ☐ New ☐ Used
Other _____

10/ What problems have you had with your child safety seat(s)?
_____

11/ What comments do you have about the use of child safety seats.?
_____

Form 84 03 01